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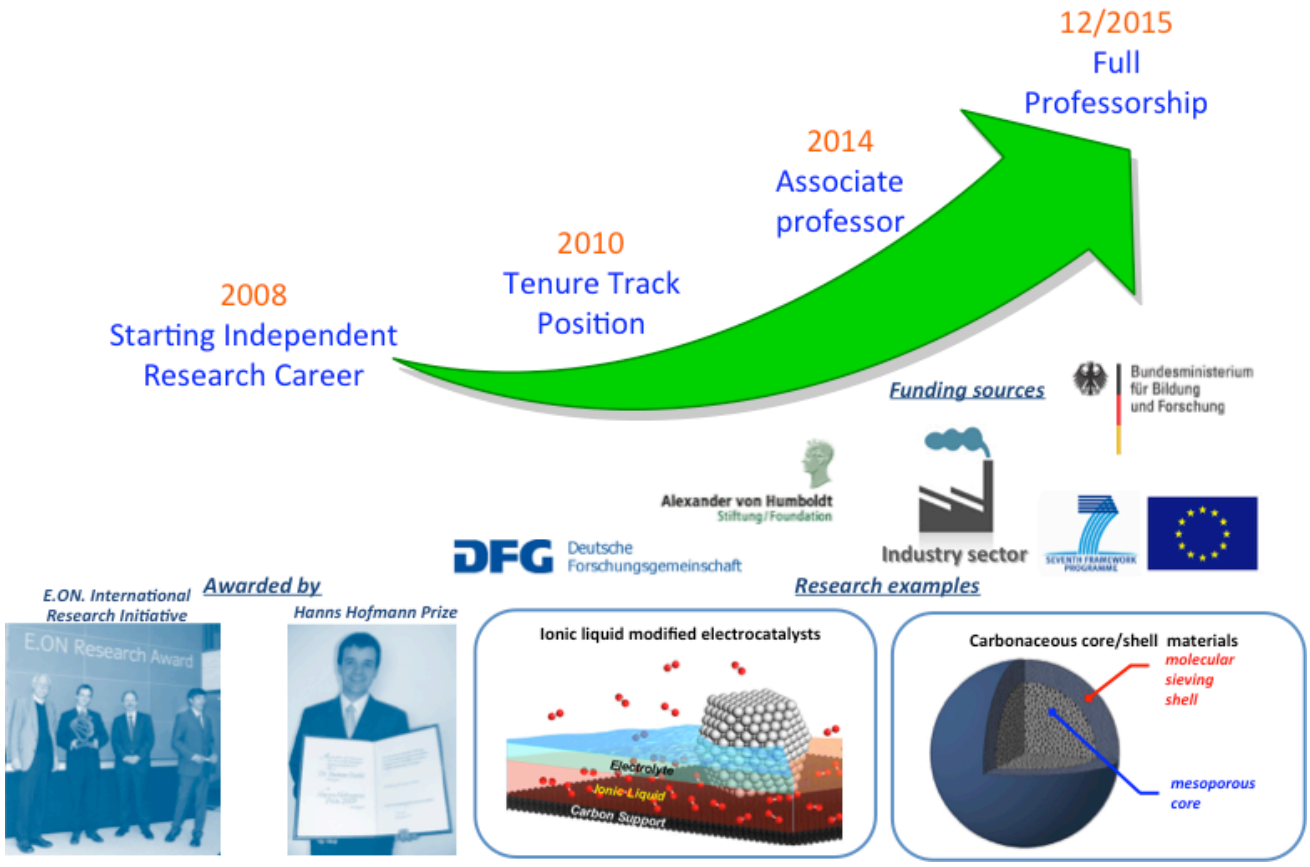
Graphical CV



Education

2007 **Dr.-Ing. (Ph.D.) in Chemical Engineering**
University of Bayreuth, Germany
Thesis: "Epimerisation of the Menthol stereoisomers: kinetic studies for the heterogeneously catalysed menthol synthesis" (summa cum laude)
Advisor: Prof. A. Jess

2004 **Dipl.-Ing. (M.Sc.) in Chemical Engineering**
University of Erlangen-Nürnberg, Germany
Thesis: "Coating of carbon short fibres via chemical vapour deposition (CVD)"
Advisor: Prof. N. Popovska

2008 **Dipl.-Kfm. (M.Sc.) in Economics**
University of Hagen
Thesis: "Organizational intelligence - a critical analysis"
Advisor: Prof. J. Weibler

Current Position

Since 12/2015	Professorship for chemical technology (permanent, W3), Chemistry Department, Technische Universität Darmstadt

Previous Positions

04/2015-11/2015	Professorship for Catalytic Materials (permanent, W2), Chemical- and Biological Engineering Department of Friedrich-Alexander-Universität Erlangen-Nürnberg (FAU)
05/2014	Offer for a full professorship for Chemical Engineering at an excellent UK university (Russell international excellence group).
01/2010-03/2015	Juniorprofessor for Catalytic Materials (tenure track, W1) assistant professorship (Juniorprofessur) within the Chemical- and Biological Engineering Department of the FAU
01/2011-06/2011	Drexel University, Feodor-Lynen Research Fellow (Alexander von Humboldt-Foundation), Materials Science and Engineering, Philadelphia
04/2008 - 12/2009	Postdoctoral fellow, Cluster of Excellence "Engineering of Advanced Materials", FAU
11/2004 - 03/2008	PhD, research assistant, University of Bayreuth, Chemical Engineering, Bayreuth

Awards

04/2016	Awarded by the ERC with a Consolidator Grant
04/2014	Awarded by the Chinese-German Center for Promotion of Science (CDZ) with a scholarship to support cooperation of excellent young German scientist with Chinese colleges
03/2012	Awarded by an Erasmus Mundus Scholarship as a visiting lecturer for the international Master Course 'Materials for Energy Storage and Conversion' (MESC)

01/2011	Awarded by the Feodor Lynen Research Fellowship from the Alexander von Humboldt-Foundation
11/2011	Awarded by the Griess Lecture award 2011 of the Royal Society of Chemistry East Midlands Section
01/2010	Awarded by a tenure track position within the Rising Star program of the cluster of excellence „Engineering of Advanced Materials“ of the University of Erlangen-Nürnberg
08/2009	Awarded by the Travel Award of the 1st Nano Today Conference 2009 in Singapore
06/2009	Awarded by the ProcessNet “Fachgemeinschaft Chemische Reaktionstechnik“ with the Hanns Hofmann price
05/2009	Awarded by the Honda German Initiation Grant 2009
04/2009	Awarded by the E.ON. Research Initiative 2008

Research statement

Prof. Etzold’s research employs chemical reaction engineering methodologies in materials research. The synthesis of advanced functional materials and their application in energy related fields and especially in catalysis is studied.

In the Etzold lab porous carbons and carbides are synthesized, ranging in dimension from nano-sized towards hierarchically structured monoliths and from microporous molecular sieves towards mesoporous supports. During synthesis the crystallinity is adjusted, influencing chemical stability, heat and electrical conductivity. In post-treatments the surface is tuned from hydrophobic to hydrophilic character and for its acidity. For catalytic applications noble and base metals are deposited on these supports by various methods.

The application of the advanced functional materials produced allows the determination of structure-activity relationships, which are employed for the process specific optimization of the materials properties. The applications studied are energy related and on the one hand concern the production of renewable hydrogen by the aqueous phase reforming of biomass. On the other hand, the storage of hydrogen with liquid organic hydrogen carriers, storage of methane by sorption and storage of electrical energy in super capacitors and finally the release of electrical energy in low temperature fuel cells are considered.

Determination of intrinsic kinetic data, combined with advanced simulations is a cornerstone and allows the visualization of processes taking place inside reactors and to develop a deeper understanding. This enables for materials production to vary and adapt synthesis conditions, reactor configuration and post processing methods with the aim to influence materials properties.

Photonic Crystal Fibres (PCF) is another cornerstone in the research group for studying catalytic materials and processes. The outstanding interaction of light and matter is used for in situ spectroscopy, by employing the fibres as continuous flow microreactor. From a chemical engineering perspective the methodology for employing PCFs as microreactors was developed and from the materials point of view immobilization of homogeneous and heterogeneous catalysts at the fibre walls was studied.